

ESTABLISHED IN 1861

THE AMERICAN BEE JOURNAL

OLDEST BEE PAPER IN AMERICA

GEORGE W. YORK,
Editor.

DEVOTED EXCLUSIVELY
— TO BEE-CULTURE.

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Sample Free.

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NO. 17.



From the brooklet, from the rushes

Come the merry song of turtles :
Hark, in tuneful songs the thrushes
Join the chorus, from the myrtles.
There they're cooling, there they're billing,
Each in notes most sweet and ringing.

Say not 'tis the turtle's walling
Of the sorrows that are nearing ;
Say, instead, that new life's creeping
In the veins of all that's sleeping.
" Winter's past and Springtime's coming,"
Is the news the bees are humming ;
And the birds are clearly singing,
" What you've longed for Spring is bringing."
—Vick's Magazine.

The Bee-Escape was first so-called by Mr. G. W. Demaree, of Christiansburg, Ky. He exhibited a " bee-escape " in Lexington, Ky., in 1881, at the meeting of the North American Bee-Keepers' Association.

Scraps of Quotations from some noted authors are now fittingly placed at the head of some of the contributions for the *Review*, indicating something of the nature of the article that follows. Editor Hutchinson says he puts them there, but " they are not always of his choosing." We just believe that they are made so appropriate by reason of the loving efforts and thoughtfulness of some angelic presence in the home of the *Review*. Now, didn't we guess it, Bro. H. ?

Mr. N. Levering, of California, begins with the April number to conduct " The Apiary " department in the *California Cultivator and Poultry Keeper*, published at Los Angeles. In his " Salutory," Mr. Levering says that he believes he originated the first apicultural department ever published in Southern California, in the *Los Angeles Herald*, in 1876, and was chosen its editor by the Los Angeles County Bee-Keepers' Association, and re-elected to that position for a number of consecutive years thereafter. In 1882 he published the *California Apiculturist*, the first and only paper that was devoted exclusively to apicultural interests published on the Pacific Coast.

Trade Notes is the name of a new department begun in *Gleanings* for April 15th. It is intended to " keep track of and describe all recent useful improvements " in bee-appliances. Bro. Root will " sit on the judgment seat," and try " to be as impartial as possible." Only devices or ideas that he considers worthy of notice will be described. It will be an interesting feature of what is already a nearly perfection in the way of a bee-periodical as can well be attained. But Bro. Root seems to want the " perfectest " kind of perfection ; and he'll have it, too, as *Gleanings* is well Root-ed.

Herr Reepen, of Germany, who reports for the BEE JOURNAL the most important aparian events occurring in " The Land of Dzierzon," we are pleased to say has been selected as delegate to the Columbian Exposition for the Kingdom of Prussia. We hope he may be here when the North American Convention is in session, so that it may be honored with his presence.

The Bee-Keepers' Enterprise is the name of a new bee-paper to be first issued on May 15th, by Mr. Burton L. Sage, of Connecticut. In his advance notice, Mr. Sage says it "will contain not less than 12 pages and cover; same size, and much after the same style of the 'Review.'"

We wish the new paper all the success its publisher may hope for, but really he must be an *enterprising* man who can venture to now start a new periodical devoted to bee-culture in view of the numerous poor seasons of the past few years; but let us all continue to hope that those unprofitable years may indeed be *past*, and that the immediate *future* may have in store such unusual prosperity for both producers and publishers, as shall fully compensate for the trying times which all have been compelled to endure.

Editorial Assistance, we claim the right to secure whenever we deem it best, in order to make these "Buzzings," etc., as interesting and profitable as possible. While we may do this, we of course hold ourselves responsible for whatever may appear as editorial matter, just the same as though we had written it all ourselves. Nearly all the large daily newspapers and monthly literary magazines each have numerous editorial writers now-a-days, while only *one* real editor decides as to the suitability and value of the matter submitted for publication by the various assistant editorial contributors. By so doing, the whole periodical becomes correspondingly more valuable to its readers, and the labor is thus lessened individually by reason of its division among several persons.

"A Modern Bee-Farm and Its Economic Management," is the title of a splendid book on practical bee-culture, by Mr. S. Simmins, of England. It is $5\frac{1}{4} \times 8\frac{1}{4}$ inches in size, and contains 270 pages, nicely illustrated, and bound in cloth. It shows "how bees may be cultivated as a means of livelihood; as a health-giving pursuit; and as a source of recreation to the busy man." It also illustrates how profits may be "made certain by growing crops yielding the most honey, having also other uses; and by judgment in breeding a good working strain of bees." Price, post-paid, from this office, \$1.00; or clubbed with the BEE JOURNAL for one year, for \$1.70.

For Indiana Bee-Keepers.—Hon. B. F. Havens, one of the Indiana Executive Commissioners, sent the following, dated April 22nd, to Mr. Walter S. Pouder, of Indianapolis, with the request that it be published in the AMERICAN BEE JOURNAL. Indiana bee-keepers should read it carefully:

An Appeal to Indiana Bee-Keepers:—

Fifteen feet of show-case, 5x6 feet, has been purchased for the State Honey Exhibit at the World's Fair. Will you furnish from your apiary any portion of this exhibit? It now remains with the bee-keepers of this State to see to it that this space is well and appropriately filled, and we fully believe that your State pride, with our abundant resources, will prove you fully equal to the undertaking.

Mr. Sylvester Johnson, well known among the bee-keepers of this State, has kindly consented to look after the Indiana exhibit. He will be at the Fair grounds throughout the time of the exhibit, and will do all in his power to see that exhibits are properly arranged.

We are depending entirely upon this year's product, and consignments can be made in July. Plan your exhibit to occupy a space $2\frac{1}{2}$ feet square, and 5 feet high, pack carefully, and ship by freight to B. F. Havens, Dep't. A, Agricultural Building, Jackson Park, Chicago, Ills. Freight must be prepaid, and at the close of the Exposition the goods will be returned to your shipping-point free of charge. No cash premiums will be paid from the State appropriation, but awards will be made by diploma.

I trust that you will make application for space at an early date, when more explicit directions will be sent you. Address me at "Indiana State Building, Jackson Park, Chicago, Ills." giving me positive answer, as to whether you will furnish an exhibit or not. I will send you full shipping directions upon notification that you will furnish an exhibit.

B. F. HAVENS,
Executive Commissioner.

J. Van Deusen & Sons, the wired comb foundation makers of Sprout Brook, N. Y., wrote us on April 20th, that "bees in Otsego country are coming out in good condition." As usual, reports are quite varied this spring. Some have lost no bees in wintering, while others have lost all. On the whole, however, we think that there was less loss than usual the past winter. Of course, the "springing" part is not yet over.

A Binder for holding a year's numbers of the BEE JOURNAL we mail for only 50 cents; or clubbed with the JOURNAL for \$1.40.

GENERAL QUESTIONS.

In this department will be answered those questions needing IMMEDIATE attention, and such as are not of sufficient special interest to require replies from the 25 or more apiarists who help to make "Queries and Replies" so interesting on another page. In the main, it will contain questions and answers upon matters that particularly interest beginners.—Ed.

Foundation Starters with Separators.

Is it necessary to place foundation starters in one-pound sections with separators? If so, why?

Gaston, Oreg.

LOUIS WILCOX.

ANSWER.—Yes; unless you use starters of foundation or comb, the bees will be likely to make very crooked work, and make a good many sections so they could not be taken apart.

Test for Purity of Queens.

If all the workers are three-banded, is that conclusive evidence that the queen is pure, and that she is purely mated?

My experience says no to the above question; and that the only true test of a pure queen, and that she is purely mated, is the production by her of pure queens, or queens with the proper markings. If we would keep our stock pure, it is essential that we know how these things are.

H. F. COLEMAN.

Sneedville, Tenn.

ANSWER.—Others have thought with you, but the difficulty of carrying out the theory in practice seems to have resulted in settling the rule that three-banded workers are taken as evidence of purity of queens. The markings of queens from unquestionably pure mothers you will hardly find uniform enough to make the task of deciding an easy one.

Perhaps it was Moisture.

I began bee-keeping in the spring of 1891, with one colony, increased to three, and for want of knowledge only got 40 pounds of comb honey. They wintered well on the summer stands in chaff hives, and last year I increased them to 7 colonies, and got 250 pounds of comb honey. All were in chaff hives with plenty of stores for winter. The 2 stronger colonies have had honey running out at the entrance. What is the cause? Is it the moth? If so, how will

I know it? and what will I have to do with them?

JOHN BAGSHAW.

Vroomantown, Ont.

ANSWER.—Are you sure it wasn't moisture from the bees, instead of honey? If there was much dampness in the hive, it is just possible that some of the honey might get thin enough to run out. If the work of worms, you can tell it by taking out the combs and examining them. Then you can dig out the worms with a pen-knife. But the fact that the strongest colonies are affected, hardly points to worms as the cause. Moisture would be more likely to run out at the entrance of a strong than a weak colony, and might look very much like honey, but the taste would decide it.

Transferring—Extracting Pieces.

1. Will you tell me the best method to transfer bees from a box-hive to the Langstroth hive? I have 27 swarms in the box-hive. They are in fine condition, and have been carrying in pollen fast to-day. Would you cut out the old comb and fit it in the frames, or would you give them foundation and drive out part of them, leaving the balance 21 days, after Heddon's plan? I intend to work them for comb honey.

2. Can I extract the honey I take out of the old box-hive, with an extractor?

O. H. KEYES.

Oran, Mo., March 13, 1893.

ANSWERS.—1. You will probably like the Heddon plan of transferring best.

2. Yes, you can extract from the old combs, but they are not so easy to manage as straight combs in frames. If very crooked, you may have to cut them up a good deal, and for the small pieces you will need some kind of a comb-basket that will hold them.

Robber Bees—Straw-Board Separators

1. What is the best way to prevent robbing when bees are put out in the spring?

2. How can it be stopped after robbing has begun?

3. Can common straw building-paper, or any other kind, be used successfully for separators in the section supers?

Melrose, Wis.

H. N.

Ans.—1. Try to have all colonies fairly strong when put into the cellar. Then you will have fewer weak ones in the spring, for a very weak colony in spring

invites robbers. See that any that are weak in the spring have the entrance contracted, and after their first flight the entrance need only be large enough for one bee to pass at a time.

2. In most cases it is not easy to stop it after it is begun. The ounce of prevention is worth two pounds of cure. If the colony is very weak, or queenless (and quite often queenlessness is at the bottom of the trouble), it may not be best to try to stop the robbing. For in trying to stop the robbers, especially if you do any such thing as to remove the victimized colony, you may only start robbing in others. Just let them go on and finish up the job, and if not disturbed, they will be satisfied to stop when there is nothing more to be had, without pitching into every neighboring colony. If you don't want the robbers to get all the honey that is in the hive, take out what you like, but always leave in the hive a little for the robbers, so they will stick to that hive. But whatever you do, don't take away the hive from its place, unless you set in its place another hive for the robbers to work on. If the colony is not too weak, sometimes robbing can be stopped by piling straw or hay a foot deep about the entrance, and wetting it thoroughly. The robbers don't like to go through it, but the bees of the colony will find their way through.

3. No; the bees would tear it down.

Stimulative Feeding in Early Spring.

1. What is thought of the feeding of bees in early spring for production of brood?

2. Is Graham flour as good as oatmeal?

3. Can too much be given?

Cooksville, Ills. E. B. ELLIS.

1. Opinions are divided as to stimulative feeding. Some believe that there is much advantage in feeding each evening, or every other evening, about half a pound of diluted honey or syrup, while some of our most experienced bee-keepers prefer to do no feeding in spring, only so far as it may be necessary to give the bees not only a sufficient amount of stores, but an abundance of it. Having given them a full supply, they are left undisturbed.

2. We do not remember to have seen a report of any careful comparison between Graham and oatmeal. Give a dish of each at the same time, and see which they seem to like best. Perhaps you will not find any difference.

3. It is not very likely that you will feed too much meal, for in places where natural pollen is plenty, they will desert it, and if there is no natural pollen, they may need some substitute.

Does the Formic Acid Cause the Pain?

Please tell us if it is the "formic acid," when administered through the agency of the sting of the bee that gives the pain which follows after being stung. Some will doubtless say "Yes." Is it formic acid which gives some people pain in the stomach after eating honey? Will formic acid give pain if introduced into the blood by other agencies, if formic acid is mixed with the honey, as Prof. Clarke says it must be in infinitesimal quantities? If you cut a finger, or cause an abrasion of the skin so as to draw blood, you may put all the honey on the wound you can, yet you will not feel any pain similar to that ensuing after bee-stings. Try it.

SUBSCRIBER.

ANSWER.—There's a big difference between "infinitesimal quantities" and full strength. Dissolve a teaspoonful of salt in a barrel of water, and you may apply the solution to a cut on the finger without pain, but the application of pure salt would be quite different. "Try it."

CONVENTION DIRECTORY.

Time and place of meeting.

1893.

May 2.—Connecticut, at Hartford, Conn.

Mrs. W. E. Riley, Sec., Waterbury, Conn.

May 4.—Susquehanna Co., at Montrose, Pa.

H. M. Seeley, Sec., Harford, Pa.

May 4.—Allegany Co., at Belmont, N. Y.

H. C. Farnum, Pres., Transit Bridge, N. Y.

May 18, 19.—South Texas, at Wharton, Tex.

T. H. Mullin, Sec., Eagle Lake, Tex.

In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

North American Bee-Keepers' Association

PRESIDENT—Dr. C. C. Miller.... Marengo, Ills.

VICE-PRES.—J. E. Crane..... Middlebury, Vt.

SECRETARY—Frank Benton, Washington, D. C.

TREASURER—George W. York... Chicago, Ills.

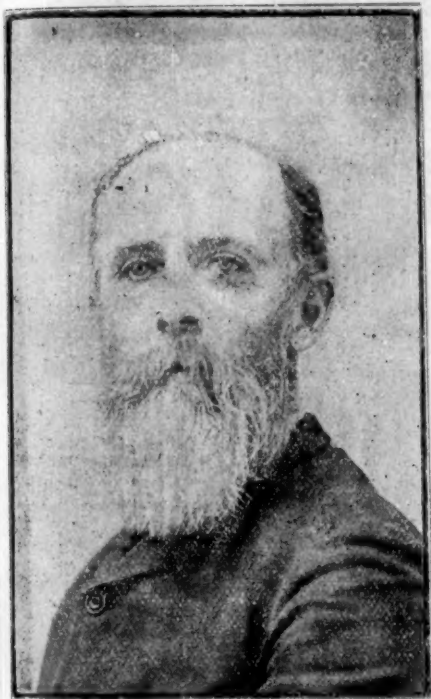
National Bee-Keepers' Union.

PRESIDENT—HOB. R. L. Taylor.. Lapeer, Mich.

GEN'L MANAGER—T. G. Newman, Chicago, Ill.

**JOSEPH E. POND, ESQ.**

Again we present to our reader one of our honorable corps of representative bee-keepers, who have for years aided

**JOSEPH E. POND.**

In making the department of "Queries and Replies" so interesting and profitable to our readers. Mr. Pond has from the very first—in 1885—contributed regularly his opinions upon the various questions propounded. He has also, at

different times, and doubtless as "the spirit moved him," written valuable articles for the BEE JOURNAL, upon the numerous and important subjects that have, from time to time, been discussed in these columns.

Mr. Pond was born in South Walpole, Mass., on May 21, 1834. He was educated in the schools of his native State, and at the "Indiana Asbury University," in Greencastle, Ind.

He studied medicine at the Howard Medical School; was in the United States service during the "late unpleasantness," in the medical department, but resigned in 1863, and began the study of law, which profession he has been actively engaged in since 1869.

Mr. Pond began the keeping of bees in 1866, being induced thereto by accidentally running across a copy of Langstroth's matchless work, "The Hive and Honey-Bee." He has kept bees only as a recreation, but has studied to a considerable extent, in order that he might know what he was doing, and to learn the reasons therefor.

Keeping bees, with him, has been a labor of love. He has carefully studied their habits, and tested, experimentally, nearly all points that in theory seemed practicable and valuable.

Mr. Pond was the first to call attention to the matter of close spacing of frames, and he still believes the method of so working will produce the best results.

He has never kept bees for profit, and only from 5 to 20 colonies at a time; hence, in some aparian things, he has had more time to learn the "whys" and "wherefores" than one who has been constantly endeavoring to make a financial success of bee-keeping.

The Queen, some one has said, is not a ruler in any sense of the word. She is a mother—the egg layer—and is governed and controlled at every step by the bees. She is under the direction of the worker bees. She does not lead the swarm, but is generally the last to leave the hive, and quite often has to be sought out and driven from the hive by the bees.



CONDUCTED BY

Mrs. Jennie Atchley,

GREENVILLE, TEXAS.

Having Divided Colonies as Good as Natural Swarms.

This question was asked in Query 849. As none of those replying had space to tell the "hows" and "wherefores" pertaining to the question, each one gave a brief answer that was applicable to his own locality; so all the answers we may say, are correct.

The reason that a divided colony is just as good as any in the South, is this: Our main honey harvest never comes earlier than May, and in some portions of the South it does not come until July; so we may divide our bees in March or April, and long before the honey harvest comes, we can have the divisions or divided colonies just as strong as any natural swarm, or as strong as one that did not swarm at all. So they are bound to be just as good for storing honey, or for any other purpose, as the natural swarms, and for me I will take them first, as the portion that forms one of the divided colonies has a young, vigorous queen (or ought to have, if the apiarist knows his business) that will have her colony boiling over in bees at the right time; when, if they had swarmed naturally, the swarm is most likely to have an old queen that will persist in swarming again just at the time they should begin to work in the boxes, thus almost rendering them useless for storing comb honey that season.

Or if they do not swarm, the queen in many instances is beginning to give way, and as natural *first* swarms usually build nearly one-third drone-comb, the consequence is at the time they should begin in the supers their population is about one-third drones, which is a great loss to the owner. Nearly twice as many bees could have been reared on the same food, and the hive chock-full of bees instead of drones. Or the queens of natural swarms may be so nearly "played

out" at the time of swarming that her colony may be so reduced at the beginning of the honey-flow that they will be useless for storing section honey. While some natural swarms, I must admit, are as good for section honey in the South as others, I speak of the majority.

The parent colony, where a natural swarm has been cast, is better for section honey in the South than the swarm, for the above reasons.

Now, to make it a little plainer, I will say that if you make your divisions at the right time, you will have all natural colonies long before the honey-flow; just for the simple reason that time enough makes them so.

For instance, we divide in April; by June the artificial part will have passed away by an entirely new generation of bees, and they have all the natural qualities of a natural swarm, and are in fact, or reality, a natural colony. So why are they not just as good for any purpose as to let them swarm? I say they are, and better.

Early natural swarms in the South are of no value except to perpetuate the colony until harvest time, and many times fall behind the rightly made artificial swarms and the after-swarms just for the reasons given above. While in the North their bees seldom swarm until the beginning of the harvest, so the Northern apiarist can put his rousing natural swarm right to work in the boxes, and, of course, get the use of them at once. And, of course, divided colonies have not had time to recuperate, and are not profitable; nor can they work like the natural swarm. That is why the answers to the above question were different, and at the same time all correct.

I have taken 4 frames of bees, brood and honey from as many strong colonies in the last of March; put them together, carried them to an out-aplary, given them a good queen, and have had such a colony outstrip anything in the aplary that same year; and the full colonies, where the frames were taken from, never perceptibly felt the loss.

More than this, I used to run my bees for box honey, and have received orders for full colonies right at the beginning of the honey-flow; and on going out to the aplary to select a good colony to send to my customer, I have found all such beginning to work freely in the sections, I just turned about and procured a new empty hive, and on going to 8 strong colonies, took a frame of bees, brood and honey, placed them in my new hive, closed the entrance (this

all being done just about sundown), put it in a cool place three days, then gave it a good young queen from a nucleus hive, and let them work about two days, or until I knew the queen was all right and laying, then shipped it. And I have had the report from such a colony gathering over 100 pounds of surplus that season.

I gave the full colonies, where the eight frames were taken, empty frames with foundation starters, and the effect was so much of "the drop in the bucket" character, that it was not perceptible after the frames were taken out; but, on the contrary, when I went to take off the crate of sections, I have often found a frame of nice comb honey where I had placed the empty frame.

There is no fiction or theory about all this, it is only bee-keeping in the South, and any one that will try and work rightly, can do the same. J. A.

Bee-Keeping in Florida, Etc.

On the south side of Orange Lake, Fla., Mr. Chas. F. Henning has somewhere in the neighborhood of 900 colonies of bees, spring count. He has been engaged largely in queen-rearing until this season. In a recent letter he states that he has taken off 2,000 sections of honey, and has 5,000 more on the hives. This season he will devote his time principally to advancing the interests of beekeepers all over the State.

Continuous rains on South Side Lake Harris have prevented the bees from giving as much surplus comb honey. We are hoping for some surplus from the later flowers, but comb honey from the orange was short. Those who run their apiaries for extracted honey had the advantage this year. Last year the season was all that could have been desired.

A LAW AGAINST ADULTERATION.

I fully agree with the editor of the BEE JOURNAL on the way to deal with honey adulterators. We need a law against selling glucose for honey, as well as against selling oleomargarine for butter. And *more*, we want a law forbidding the manufacture and sale of artificial honey under any and all circumstances.

Let us take this matter in hand, as suggested by Mr. Newman (page 697 of the BEE JOURNAL for Nov. 24, 1892), and raise whatever amount will be needed to carry on the fight to the end. Let each one who is interested, send in

his dollar, or more, according to his ability, to be retained until sufficient funds have been raised to put the matter through. Let the producers of pure honey petition for a stringent law against selling anything but pure honey, under any name that will injure our legitimate business, or throw discredit on any honest producer.

Some may say, "A law will not prevent adulteration." There may be violators of this law, as well as the laws against stealing, fighting, etc. There are some who would sell artificial honey if there were no law forbidding it, who would not do so in violation of law. With a heavy penalty attached to the law, many others would be deterred, and this difficulty would be practically removed, and our chances of success in this our chosen pursuit be increased.

MRS. MINNIE WOOD GORDON.

Bloomfield, Fla., March 30, 1893.

Father Langstroth, in his entertaining "Reminiscences," which are being published as a serial in *Gleanings*, gave some "interesting incidents of Samuel Wagner, founder of the AMERICAN BEE JOURNAL," in the number for April 1st. After giving a letter received from Mr. Wagner in 1852, Mr. Langstroth follows with these two paragraphs, showing the excellent character and qualities of the lamented founder of this journal:

As soon as Mr. Wagner became acquainted with my hive, instead of publishing his translation of Dzierzon, for which he was then in negotiation, he urged me to write a book which he believed would, with my movable frame, do more for the promotion of American bee-culture than anything from abroad. Being an excellent German scholar, and very familiar with both ancient and modern apiculture, more especially with all that could be learned from German sources, he placed all his varied information at my command absolutely, without money and without price, and labored with untiring zeal to make my book and hive a success. Seldom do we find such an admirable example of rare magnanimity and disinterestedness.

Visiting him at intervals, and corresponding with him frequently, he kept me posted up in everything occurring in Germany which was of interest in our favorite pursuit. His large library, so full especially in the German literature of bee-keeping, was thoroughly at his command, and he could turn at once to book or periodical for information on any point that might come up for discussion.

"Bees and Honey"—page 517.



Bees Building a Queen-Cell Over a Drone-Egg.

Query 868.—1. When bees build a queen-cell over a drone-egg, and feed it on royal food, are they aware of the fact that it will not produce a queen? 2. If not, why does the capping differ from the real queen-cell?—Pa.

I don't know.—A. J. COOK.

I don't know.—EUGENE SECOR.

I give it up.—JAMES A. GREEN.

Not being a "mind reader," I cannot tell.—JAS. A. STONE.

1. I do not know. 2. Give it up.—EMERSON T. ABBOTT.

I never asked them. Perhaps some one else has.—MRS. L. HARRISON.

If they think at all on the point, they probably have very serious doubts, and are catching at straws.—R. L. TAYLOR.

1. I suspect so, from the fact that they'll not use such an egg if they have others. 2. I don't know. Does it?—C. C. MILLER.

1. I think not, or they would not "fool their time away" building such cells. 2. Like Dr. Miller, "I don't know."—C. H. DIBERN.

The bees probably have a way of knowing a mature drone from a queen larva, but I do not think they can tell one egg from another.—G. L. TINKER.

I think they start in good faith, but as the larva matures, they find that it is a drone, and then they cap it without taking much pains with it.—E. FRANCE.

1. Who can tell? Probably not, else they would save their labor. 2. Can any one tell why our bees do many seemingly incomprehensible things?—J. E. POND.

Bees are queer "critters," and do many (to us) strange things—like a person drinking alcohol when they know it will produce death and damnation.—H. D. CUTTING.

How much bees reason and know I am not going to tell you; for, candidly, I do not know; but one thing I do know, and that is that bees never "build a queen-cell over a drone-egg." A queen-cell is never built over anything but a larva.—G. M. DOOLITTLE.

1. It is not easy to tell what bees think. 2. I have never seen a queen-cell built over a drone-egg, and I was not aware that the capping was different.—M. MAHIN.

I cannot fathom the thoughts (?) of the bees on this subject. Bees sometimes apprise you of their intentions before stinging. You can be certain afterward.—P. H. ELWOOD.

1. It has seemed to me that they do not real heartily believe that it will produce a queen, but I am unable to say at just what stage doubt give way to certainty.—S. I. FREEBORN.

1. I, for one, am not able to read the thoughts of bees, though I might sometimes imagine I did. 2. I imagine they may have some intuitive knowledge on the subject.—J. H. LARRABEE.

This is one of the unaccountable facts—or rather, "freaks"—of queen-rearing. I am free to confess it is beyond my ken, but is probably brought about by some abnormal condition.—WILL M. BARNUM.

1. I don't know if they are "aware," but they seem to regard it as the last hope. 2. The excess of royal food kills the grub, and consequently no cocoon is spun to preserve the shape of the cell.—J. P. H. BROWN.

1. This is all conjecture, yet there is evidence that they do know the difference, and build cells over drone-larvæ simply because they have nothing better. 2. The very fact that they do make a difference in the cells is evidence that they know there is a difference.—MRS. J. N. HEATER.

I don't think they know anything about it while it is an egg, but find out it is a drone before capping time. If bees can change the sex of an egg, why don't they make queens out of such? Or why don't they make workers out of laying-workers' eggs? Bosh!—MRS. JENNIE ATCHLEY.

1. I guess not. A hen will set on a nest without any eggs in it. Bees and hens, and "sich," do not "reason." The impression prevails among bee-men that normal queens are never hatched from plain, smooth cells. This is a very great delusion. I have often seen perfect queens hatched from smooth cells. All queen-cells are smooth until they are sealed. The indentations—miniature cells—are worked on the cell after the sealing, and cannot effect the inmate of the cell. Perhaps the embellishment is the work of the guards to employ their time. 2. The "capping" does not differ. It is the inmate that differs.—G. W. DEMAREE.



Report of the Indiana State Bee-Keepers' Convention.

Written for the American Bee Journal
BY WALTER S. POWDER.

(Continued from page 496.)

Pres. Russell—The next in the order of our programme is an essay by Mrs. Alice S. Moore, of Greensburg, Ind., on

What are the Honey-Plants of the State of Indiana?

"How doth the little busy bee
Improve each shining hour?
It gets a hustle on itself,
And robs the early flower."

Honey is not made by the bees, but nature has provided the delicious nectar in myriads of beautiful flowers that deck forest, field and garden in quantities far exceeding the wants of bees, and they store it away and man utilizes it for his pleasure and profit.

Honey and pollen are supplied by nearly all the flowering trees, shrubs, vines and plants of the vegetable kingdom, and our own State is well furnished with fine nectar-yielders, and the bees are always the first to detect the earliest flowers. In writing of some of Indiana's honey-plants, I will include a few that are so universally cultivated that they might almost be classed as natives.

First come the alders, soft maples and willows. These are very early, and furnish the bees an acceptable change from the spare winter diet. Then the hard or sugar maple throws out its golden tassels, and "the little brown pets" have another supply of nectar and pollen. The peach, pear, quince and plum, rich in honey and pollen, later extend an invitation which is never slighted by provident bees, and then the apple-blossoms afford a real harvest.

For bee-pasturage the cherry has never been fully appreciated. Several of the early varieties bloom in a time when most needed by bees, and the latest are fully improved by them. The raspberry continues in bloom over two

weeks, and few flowers furnish so large a quantity of purest nectar; it is a crop of great value to bee-keepers. Strawberry and blackberry blooms also yield nectar.

Next come the clovers. The sweet clover blooms and yields honey continuously from June until August, with usually a second crop of bloom lasting until late fall, and the honey is unsurpassed in color and flavor. Melilot clover is said to be worth the cost of cultivation to the bee-keeper because its flow of nectar is not affected by atmospheric changes, and is second to none in flavor. Alsike clover is also a good honey-plant, and the bees have no trouble in finding it. Italian bees gather considerable honey from the red clover. The well-known white clover fills the air with its ambrosial perfume, and the bees in myriads sing from flower to flower, and never succeed in gathering all its honey.

Honey from buckwheat is rich but dark. Mustard is most profitable as a honey-plant; it keeps branching and blooming all summer. Catnip will repay cultivation for honey alone. It continues to blossom for a long time, the bees working on it with the greatest assiduity from "early morn till dewy eve." Hoarhound, peppermint, spearmint, wild balsam, teasels, thistles, burdocks, wild snap-dragon, columbine, plantain, wild geranium, may apple, wild sedums, violets, wild oxalis, the bell-flowers, field larkspurs, blood-root, all the milk-weeds, tongue-grass, know-weed daisies, wild lettuce, iron-weed, blue-curly, cardinal flower, wild lobelia, wild hydrangea, starwort, wild parsnip, wild rose, trumpet creeper, wild agertum, rap-weed, sumac, leather-flower, etc., are all natives of Indiana, and are all honey-plants.

Motherwort cannot be too highly commended as a honey-plant. It blooms from July until frost, and grows in great abundance. The figwort, also extensively advertised as "Simpson's honey-plant," is a native of Indiana. It is a large, coarse-growing plant with innumerable small flowers, with an opening at the base of the seed-ball which is hollow and filled with the purest honey, and so rapidly is it deposited that in two minutes after being taken out by a bee, it is again filled with a shining drop of nectar. So freely does it yield honey, that a branch removed and given a sharp shake, the honey will fall in drops. It blooms from July until frost.

Ground ivy, a creeping vine that covers the ground in many parts of the

State, is a fine honey-plant. The wild asters are all excellent honey plants, bees sometimes collecting from them as late as October.

Spanish-needles yield large quantities of rich, yellow honey. Smart-weeds yield strong nectar, in abundance, of a peculiar odor. Golden-rod, by many, is given the proud distinction of being the banner nectar-bearer of fall flowers, giving bountiful measure from its golden bloom. The list is almost endless, and nearly all of the common garden vegetables and vines secrete honey in their blossoms. One extravagant writer speaks of a variety of corn which might yield "a gallon of honey from the tassel, a cake of beeswax under each leaf, and a jug of whisky from each ear!"

Among the trees, the locusts are almost certain to bloom, and they yield a bountiful supply of rich nectar, and bees literally swarm among the highly perfumed blossoms. Locust honey can hardly be said to be dark; it is of a rich, pale red-gold, and its keeping qualities are excellent. The basswood, or linden trees, when in bloom are like great music-boxes, giving forth the hum of thousands of bees as they swarm in and out to drain the nectar from overflowing cups. There is no tree that yields so abundantly of nectar as the linden, nor is there any superior in flavor.

The tulip or poplar tree yields an abundance of delicious honey, nearly a teaspoonful of pure nectar often being found in one of its large, bell-shaped flowers. Box-elder, blooming between the linden and poplar, is a great favorite with bees, and yields a superior honey. Several varieties of willows are good honey-producers, and grow in nearly all localities.

Even small grounds could be utilized for the benefit of bee-keepers. If there is a pond or low place, it could be transformed into a beauty spot with pussy and button willows, golden-rods, wild bergamot, wild asters, and mints.

I have read of a honey-plant mound, six or eight feet high, and sloping gradually to a level. It was marked off in rings; in the center was planted figwort, next golden-rod, then spider plant; next motherwort and asters, then catnip and smartweeds, surrounded with peppermints and finished with ground ivy. The combination of purple, yellow, pink and white flowers makes it attractive to both man and bees.

Early in spring, a round bed bordered with dandelion and the center filled with violets—white and blue—makes a beautiful show of color. They are good

honey-plants, and coming early, they are a luxury for the winged pets.

If on Arbor days bee-keepers would see that maples, lindens and poplars were planted, we should not only have shade, but beauty and profit. Waste places along the roadside and railroads could be covered with figwort, motherwort and sweet clover, so that when the

"Swift-winged forager, the bee, sets forth
Scouting from east to west, from south to north,
Shall find and gather with industrious haste
Sweetness, that else upon the earth would waste."

"Tis for them, the blooming world
Nectareous gold distills."

ALICE S. MOORE.

Pres. Russell—We have just listened to this very able and enjoyable essay by Mrs. Moore, and I think she deserves a vote of thanks from this Association for it. She is one who has always taken a very great interest in this branch of science, and has, at different times, given us almost a volume of knowledge. I think as a slight mark of our gratitude, we should send to her, as she is absent, a vote of thanks.

Mr. Muth—I am in favor of what our President has said. It is an excellent essay, indeed. I therefore make a motion that we send a vote of thanks to her.

The motion was carried, and the following adopted:

Resolved, That the Indiana Bee-Keepers' Association hereby tender a sincere vote of thanks to Mrs. Alice S. Moore, of Greensburg, Ind., for her entertaining and valuable essay.

Mrs. Moore's essay was then discussed as follows:

Pres. Russell—The basswood that Mrs. Moore has spoken of I have been working with for several years. I take sprouts of these trees up by the roots, which is very easy to do at this period of their growth, and set them out all around my farm, just where I want my fence—just a straight row of basswoods, about 20 feet apart. In about two years, during which time they did not give me any trouble, I put up the wire fence, using these trees as posts. I think this is a very good plan, and then, besides, it is a grand thing for the bees, as it has on it a very pretty flower.

Mr. Pope—I think that is a good idea, and I think the people of this State should set out that kind of tree more than they do. If they wanted to get a shade tree, what is prettier than the basswood?

Pres. Russell—The maples are a most beautiful shade-tree, but the basswoods are just as pretty, and have the loveliest flower that ever was seen. It is a very hardy tree, too. As for the worms, three table-spoonfuls of chloro naphtholine dissolved in a bucket of water will kill all of them.

Mr. Hicks—I sowed buckwheat, which made a very fine growth and luxuriant bloom, but I got no honey and no seed. I had to feed my bees in consequence for lack of winter stores. Can any one tell me why it is that when we do all the labor and make preparations, we then get no honey?

Mr. Catterson—Some six or seven years ago, a neighbor of mine had a field of buckwheat of some six or eight acres. He said when the buckwheat was in bloom, about seven or eight o'clock in the morning, the bees would just come in flocks there until about 11 o'clock, and then they would go away again. Two years ago last summer, I had about six acres of silver-hull buckwheat, and I don't think the bees worked on this at all, and I don't know whether it provides honey as well as the old-fashioned buckwheat or not. In regard to its failure to make seed, I have been told that during the warm weather, it will not form. Then if that kind of weather should last until autumn and destroy the bloom, of course there would be no seed. The weather must be cool to produce seed and honey.

Pres. Russell—About 1½ miles west of here, a man raised the silver-hull buckwheat this year, and it did a good deal as Mr. Hicks has said. It seemed to blast at bloom, and to make no seed. I cannot tell why this is; but I have now 50 bushels of as pretty buckwheat as you ever saw—the Japanese.

Mr. Catterson—The silver-hull will remain in bloom about twice as long as the Japanese, which only stays in bloom about a week or ten days. It is very poor buckwheat that will not yield seed.

Pres. Russell—I believe in sowing all crops at the right time of the moon. I think that has much to do with success.

Mr. Muth—When is the right time of the moon, Mr. President?

Pres. Russell—Well, that I am not going to tell. (Laughter.)

Mr. Catterson—Mr. President, as it is getting late, and I don't know but what my name will be called next on the programme, I, for one, am in favor of adjourning until this evening.

The convention then adjourned until 7:30 p.m.

(Continued next week.)



Working Colonies by the Jumping Plan.

Written for the American Bee Journal

BY E. L. PRATT.

Some time ago I published my method of working bees by the jumping plan, and it has proven so successful in quite a number of large apiaries in different parts of the country, that I give it again, with what changes and additions that have been found advantageous in practical experience for two seasons. All who try this method are requested to make a report to the author, with any suggestions that can be given from experience with it.

The first thing to be done in spring is to give the hives a thorough renovating. Look each colony over, and see that it has a good queen and plenty of stores when equalizing operations commence.

For some reason the bees die off in some hives very much faster than in others, although the colonies were of equal strength in the fall, and the queens were equally prolific. Some queens do not do so well as others in early spring, and unless such colonies are given some aid from the apiarist, they will amount to nothing all the season, as they cannot build up in time for the harvest.

I have found the jumping plan equalizing the colonies as expeditious and effective as any I ever tried. I look my colonies through, mark the very strong ones, and exchange stands with the weaker ones; jumping the hives over and across back and forth, at intervals of about ten days, until I have them all of equal and proper strength to store comb honey in the sections, which means full of bees and brood, but very little honey.

All colonies that are found too weak to possibly build up in time, should be left out of this operation, and let alone to be built up and re-queened later on.

It is very important that all the queens be of a prolific sort, and the bees

good workers, if you hope to make anything at handling bees for a living.

A colony covering three or four combs fairly well will do to work on this plan, and when a colony of this size suddenly occupies the stand of one covering six or eight combs, there is an influx of population to the weaker colony that will give the queen in that hive courage, and she will at once start to fill with eggs all the comb available. One or two frames of the unsealed, and very young larvæ, should be taken from the strong colony and given to the strengthened one as soon as a sufficient number of bees have joined to properly care for it—which will be in the afternoon if the colonies were jumped in the morning.

Leave as large a portion of the sealed and hatching brood with the strong colony as possible; such a large number of bees are taken away by the change that they will not refill with young bees in time to cover the very young brood that is left. Here is where outside cases work in well on cool nights.

We will now suppose that all the colonies are in good working condition. It is about ten days before clover opens, and everything is in readiness for a good crop of honey. For illustration, we will suppose you have four good colonies of bees in prime condition, arranged in groups thus: One facing east, and three in line at its side facing south.

Ten days before your main honey flower opens, remove colonies 1 and 3, and place them in the same relative position by the side of No. 4, so as to compel the working force from the hives 1 and 3 to enter No. 2, which should be tiered up for extracted honey, or arranged with two or three tiers of boxes with foundation starters. To prevent such large colonies from hanging out or swarming, they should be arranged according to the Pratt automatic hiving plan, which has been explained and illustrated in these columns.

A bottom-board is placed on an even foundation, and a hive-body or shallow brood-chamber placed on it; into this hive-body place one or two combs and empty frames with starters of foundation; cover this with a swarm hiving-board, and place the colony and its supers on the top of all. The lower entrance may have a common excluder, and the upper one left open wide.

If a swarm issues, it is automatically hived in the lower body, and work will progress rapidly in the supers, and with such a tremendous force of bees the honey will "roll in in waves," as it were.

One will readily see that the ventila-

tion with such an arrangement is perfect. The entrance is never crowded, and the bees going and coming do not in the least conflict with each other. By this arrangement extra strong colonies will hold together without the desire to swarm.

As soon as the bees begin to fly well again from colonies 1 and 3, or in about eight or ten days, they should be jumped back to their original position by the side of No. 2, and left in this position until after the harvest is over. Colony No. 4 will thus receive extra strength, and should have extra storing-room, and the south entrance arrangement the same as was given to No. 2. If all the hives had supers started they should be tiered over the colonies strengthened for completion.

Having such an extra large force during a good honey-flow, the same bees that would have worked very well in three different hives, will now show you what honey-gathering is. The amount of work and expense by this plan is reduced nearly one-half, and with such rapid storing by this extra large force, the honey is all first quality. During a moderate flow, honey will come in such quantities that one is surprised—every comb sealed full, and attached firmly to the section.

After the honey-flow is fairly over, take every ounce of honey away from all the colonies. Extract what can be gotten at in the frames, and leave the bees with as little on hand as possible, so they will not rear a large number of bees that will be consumers only. Then if you have a good fall flow, no feeding will be necessary. The same operation can be gone through again later in the season, with the view to leaving all the colonies in good condition for winter. Unless the fall flow is unusual, such as from buckwheat, do not catch up the force from hives 1 and 3, but jump them simply for equalization, so that each may then gather enough honey for winter stores. All colonies that have been used for nuclei, etc., can now be doubled in to advantage.

Do not try to winter any but strong colonies with plenty of stores. If your hives are properly arranged for expelling the moisture, there will be no trouble about such coming out well in the spring. If wintered on the summer stands, outside cases ought to be used, and the hives should stand about 14 inches from the ground. If possible, select a sheltered spot for wintering bees out-of-doors.

Beverly, Mass.

That Case of Bee-Diarrhea and Supposed Cause.

Written for the American Bee Journal

BY DR. C. C. MILLER.

Here is a letter from Austin Reynolds, of Cataract, Wis., in which he gives the sequel to the case reported on page 389:

"As you requested, I will now let you know how my bees came out. On March 7th, the mercury stood 43° in the shade, with no wind stirring, and the sun shining. I scattered oat-straw and chaff on about one-eighth of an acre, and got a man to help me bring the bees out. I took a clean bottom-board, exchanged it for the dirty one of the first hive, then scraped and washed this last for the next hive, and so on through the whole lot, 13 in number. It was a sight to see the bees empty themselves; but one better stand from under. I don't think there was a space of one foot square in three rods around but what had more or less spots on it, and but very few bees failed to return to the hives. They would alight on the straw and soon rise and fly back to the hives.

"At sundown, they having become quiet, I returned them to the cellar, and if they became restless afterwards I would open the outside cellar-door at night, and twice I wet cloths and laid at the entrance of the hives to give them a drink, which seemed to quiet them. On April 3rd I took them out of the cellar, and placed them on the summer stands, every colony being dry and healthy as ever, as far as I can see. They had not spotted their hives since their flight, and are now, April 10th, bringing in pollen in small quantities, and the trough where I water them is covered with bees.

"On page 439 of the AMERICAN BEE JOURNAL, R. H. Humphries says he thinks it was dampness that caused my bees to be diseased. I think he is wrong, as I have a very dry cellar, and I had a bushel of lime in it, and a two-inch pipe running from the cellar and connected with the stove-pipe above. I lay the trouble to the way the bees were handled when putting them into the cellar. The man who helped me was careless, and hit the hives against the cellar stairs, and the bees must have filled themselves without a chance to fly afterwards, hence the trouble.

AUSTIN REYNOLDS."

There are some points of interest connected with this case. The bees had a

successful cleansing flight with the thermometer at 43°—a lower temperature than is generally considered desirable, but the bright, still day helped much.

I think Mrs. Atchley can see in this case a decided advantage in having loose-bottoms that could be easily cleaned.

In this case, at least, the bees stood confinement all right after their flight, which has not seemed to be always the case. Just why, I don't know, for theoretically one would think that a flight would help bees in the cellar as much as those on the summer stands.

While Mr. Humphries may be right in thinking that the fatal cases of which he speaks, on page 439, were caused by dampness, that hardly justifies the conclusion that a flight would do no good in such cases. I venture the assertion that if the bees of which Mr. Humphries speaks could have had a flight in time, they might have been saved. At any rate it seems to be one of the things upon which all experienced bee-keepers are agreed, that from whatever cause diarrhea may arise, a cleansing flight is always a cure. I do not remember that I ever heard any one but Mr. Humphries express a dissenting opinion.

It is possible that Mr. Reynolds is correct in his supposition, that jarring the bees on carrying them into the cellar was the cause of the trouble, but I have doubts about it. In several cases I have known colonies to have their hives knocked, not only once but many times, while in the cellar, and still come out all right, so that I do not fear that kind of disturbance as much as formerly.

Marengo, Ill., April 10, 1893.

Bee-Keeping in Oklahoma Territory, Etc.

Written for the American Bee Journal

BY JAMES A. MARSH.

Spring is coming—is right here, and with it the bee-fever. About a year ago I left my home, family and bees in Missouri to seek a home in this country, now a part of Oklahoma Territory.

Well, I am here. My home is here. My family are here, and I also have one, and the only colony of bees in this part of the Territory.

I will not waste this opportunity for proving a few disputed points concerning bees which could not be proved where bees are plentiful, or at least

satisfy my own doubts. Horsemint is coming up, and there are many other weeds and shrubs, including the mesquite, which I believe is a dwarf honeylocust. Almost all the flora is new to me, and I have no work on botany adapted to this region, therefore I will have to wait to see what the bees think about these flowers before I can tell much about whether this is a good, poor or indifferent bee-country.

My bees arrived too late in the season last year, so I am all impatience to see what they will get from certain flowers which had an abundance of honey last year, when there were no bees to gather it. I do not enjoy sensational stories, yet I believe I have found something good growing on these broad prairies.

BEES REMOVING EGGS FROM CELLS.

On one occasion my experience was different from that given on page 270, concerning bees removing eggs from one cell to another. A colony lost their queen early in the season; I examined their combs closely, and saw no brood or eggs. I then cut from a comb of another hive containing eggs, a small square, made a hole in a comb of the queenless hive into which I placed the piece containing eggs. In three or four days I examined the comb, in the hope of finding queen-cells started, but, to my surprise, I found no cells, and the eggs were gone from the square of comb. I replaced it with a fresh section containing eggs, and again examined them in three or four days, finding the eggs missing from the inserted piece of comb again; but on close examination of the other combs, I found larvæ apparently three or four days old, and eggs not yet hatched. I took care to see that there was no queen in the hive.

A queen was reared and fertilized, and lived until I pulled her head off a year later.

PACKING AS AN ABSORBENT.

There is a good article "continued" on page 275, by James A. Green. But why use packing as an absorbent, when we want above all things to get rid of the moisture? Why not use it simply as packing, with a non-absorbent intervening between it and the bees?

I cannot agree with Dr. Brown, on page 277, and could not afford to be sunning moisture away, which my absorbents had collected, when it might just as well have been allowed to collect upon the sides where it would run down to the bottom-board and out of the hive

without damage to the bees, and without attention from the apiarist.

I mean no offence, but want the apparent inconsistency of these absorbent ideas aired in the BEE JOURNAL, and I hope Prof. Cook may give his opinion on this "absorbent" topic.

Seay, Okla., March 8, 1893.

The Packing-Case Method of Wintering Bees.

Written for the American Bee Journal

BY IRA W. RUSSELL.

My attention has been drawn toward Mr. Green's method of packing bees for out-door wintering. I have wintered bees on that plan for the last three winters, with this difference in the method of construction of hives and outside case: My cases contain four hives, as does Mr. Green's, with the difference that the hives are not removable, but are built stationary in the center of the case, with about six inches of space left all around, between the sides and the bottom, for packing material.

The top of the case is made in two doors hung with hinges to the sides of the case, and when closed they make a roof (gable fashion) to the case. These doors should be high enough to admit at least two supers, on top of hives, and covered with tin. All that is required to prepare them for winter is to raise the doors or covers, and fill the space over the hives with hay or straw.

I think that when bees are thus prepared, they will stand the coldest weather we have in this latitude, which is about 30° below zero.

A great many would object to the bulk and weight of such a contrivance, on account of moving and handling. Well, I have not tried to move mine since I placed them in their present position, which was two years ago last fall.

Right here let me say that I have been experimenting a little with the colony in one of these hives. Last spring I wanted to feed a colony that was weak. One of the colonies next to it was very strong. As I uncovered them, the bees of both colonies ran together over the tops of the frames, from one hive to the other, there being only an inch board between the two colonies; of course, all they had to do was to crawl over the top edge of the board to go from one colony to the other.

As they did not fight, I conceived the idea of feeding both colonies from one

pan of sugar syrup, placed on top of the frames. I found they worked harmoniously together.

When putting on the supers, I arranged them as one super, fixing them so that both colonies could work together, thinking that by so doing the strong colony might help build up the weaker one. This, I believe, they did, although I could not spare time to watch them closely. The result was that the weaker colony built up very fast, and the supers over both hives were filled at or about the same time. Neither colony cast a swarm.

Now, I should like to ask if any of the old bee-keepers have experimented along this line. I should like to hear if any one has tried working two or more colonies together, thus making the strong colonies help build up the weak ones, and what effect it had, if any, on swarming.

I put away 39 colonies last fall. The winter has been very severe. Bees have not had a flight in about four months.

Storm Lake, Iowa, March 4, 1893.

Some Questions About the Reversing of Frames.

Written for the American Bee Journal

BY F. L. THOMPSON.

I wish to ask for information on some points about reversing, which are not clear to me, though I have six bee-books and have had the BEE JOURNAL for the last year. My case is this:

I have reversible hives which are horizontally divisible into three brood apartments, each apartment having a capacity of $3\frac{1}{2}$ Langstroth frames, consequently the whole has a capacity of 10 Langstroth frames. Now, I have carefully considered the subject of contraction, with reference to this locality, and it does not seem to me suitable to it. There are 600 or 700 acres of alfalfa near by, which cannot be cut all at once, consequently there may be, and probably will be, a honey-flow sufficient at all times before Aug. 1st to enable the bees to store honey besides what they need themselves. After Aug. 1st, and until Sept. 1st. or after, there will be a honey-flow from cleome; and After Sept. 1st it is still desirable to have plenty of bees, in order to have them in good shape for wintering. Now, if I do not practice contraction, and still keep the honey above those 10 frames, so as to give plenty of room to the queen, it

would seem as if reversing was the only thing left.

Although Mr. Heddon has said in the BEE JOURNAL, "I have found no ill effects whatever from a large experience in reversing," Mr. Dadant quotes, in his book, page 414, "As far as bee-reproduction is concerned, the reversing apiarist reaches the same result as the brimstoning apiarist;" and below he says:

"In the present state of progress in bee-culture, reversing is less damaging, but its disadvantages cannot overbalance its advantages, unless it is practiced very cautiously and sparingly." It seems strange that in all the time reversing has been before the public, the amateur can find such conflicting opinions in two good authorities.

But the points I wish to ask about especially, are, How does Mr. Heddon reverse? Does he leave a reversed brood apartment alone an indefinite period, trusting that egg-laying and brood-rearing will go on in reversed combs with the same ease and safety as in the normal position? or does he reverse just long enough for the bees to get the honey out, and carry it upstairs, then restore the apartment to its original position? If the former is true, why should not a reversed brood-comb stay reversed all the time? How can honey stay in it, if reversing is what makes it run out?

Mr. Shuck speaks of "practicing inversion weekly, when the whole gather is likely to be in the supers." This would suit my case, if I knew what he meant—single or double inversion. But "weekly" inversion would be very damaging, indeed, according to what Mr. Dadant implies.

I will be very much obliged for a solution of these questions, as well as an opinion as to whether I am right or not in not practicing contraction under the circumstances.

Denver, Colo.

[Will some one who has the experience, please reply to the foregoing questions?—ED.]

The Winter in Iowa, Honey Prophecies, Etc.

Written for the American Bee Journal

BY THOS. JOHNSON.

The past winter has been one of the steadiest and coldest we have had for several years. Bees have perished in

chaff hives, and what I can gather from bee-keepers in the surrounding country, there will be a far greater loss of bees than there was in 1891, by one-half. There has not been a day that bees could fly since the forepart of November, and I have already an applicant for bees by the pound to fill total losses from the severe winter, their bees having frozen.

I left a few colonies of bees out just to see how they would winter, and, to use the language of Dr. Miller, "I see'd." All perished, even in chaff hives, and, from all reports, bees that are wintered out-doors on the summer stands will be a total loss in this part. Those in repositories are wintering well so far. This being March 6th, most of the snow that fell during the winter is still on the ground, but as luck would have it, the ground is very little frozen, and as soon as the snow goes off it will have a tendency to vegetation.

THE HONEY PROPHET AND PROPHECIES.

After carefully reading Mr. Wilson's explanation of his prophesy last year, I notice he refers me back to his former article. He wrote that if he were convenient to Jackson county, Iowa, he would move his bees there. If my informant is correct, the honey-flow from linden and white clover was as light, if not lighter, than in adjoining counties, and far behind this locality. He refers to the report of *Gleanings* for 1892, and that they say the average has been better this year than for the last five years. I cannot see whereon *Gleanings* bases that opinion. If so, where is the honey? Not on the market, nor has it been, nor is it in the hands of the producer. California has not the honey she has had for the last five years, nor any other State, even Ohio, the home of *Gleanings*.

Mr. Wilson tries to make the readers of the BEE JOURNAL believe that it rained more in the eastern than in the western part of Iowa. It did not, and when it ceased in the western, it also ceased in the eastern part, excepting showers now and then, and the loss of bees was fully as large in this part as it was in eastern Iowa.

Mr. Wilson says I am no better bee-keeper than the average. I don't claim to be, nor I don't claim to tell what kind of a corn-crop the people of Iowa are going to raise, nor the cotton or gruber crop Tennessee will raise, before the seed is planted. It is true that I reported my bees in good condition, and tried to give the true cause of loss in these parts, by bee-keepers not having

their bees properly ventilated. I found that where the apiary was located with surroundings to protect the hives from wind circulating around them, there was the greatest loss, and before the general rains ceased, nearly every colony I had was pretty weak, as well as those of my neighbors.

Mr. Wilson said that the honey-flow would be more general than last year, and still holds to that belief, and says, "Who says it is not so?" I do, and I believe every person in the land interested in honey knows that in the year 1892 the honey product of the United States was the shortest it had been for the past five years, and if Mr. Wilson had watched the different reports that were published in the papers, from the Atlantic to the Pacific, he would not have made that statement.

He also says that most of my honey was produced from fall flowers, and not from linden and white clover, as was his prediction. Three-fourths or more of my honey was from white clover and linden, and if we had had the fall flow last year that we had in 1891, the crop would have been immense. I wonder if Mr. Wilson has any recollection of writing to me, on June 29, 1892, that he was interested in my travels through those parts of our State, etc., and said he would give me a better chance to prove him a false prophet; and also said that southwest of my county (meaning Carroll, but I live in Guthrie county), southeastern part of Crawford, and a very small portion northeast of Shelby and northwest of Audubon had a better flow of nectar than any other part around or adjoining it.

Now if his above prediction is based on linden and white clover, he has predicted for a country where that article is very scarce, and where the country is new. Linden does not grow on the prairies in Iowa, but along the streams of water where in these parts the crop was short in that direction. As for the fall flow, they were visited by growing showers and heavy rains in August, which caused the fall flowers to produce nectar, and they had a better fall flow than we had in this location. Now, I will leave that prediction to the readers of the BEE JOURNAL, through which he requested me to answer his predictions. I will say that he has jumped to conclusions without any basis; first, by stating how much honey I got, and from what source; and second, by quoting from *Gleanings* as proof that the honey-flow was better than it had been for five years instead of taking the reports of

writers in different States during and since the honey-flow.

Mr. Wilson has been cautioned in regard to his predicting that he might jump into a country where there was no linden or white clover, and he did that very thing when he "jumped on" the corners of Shelby, Crawford, Audubon and Carroll counties, because white clover has just started, and there is no linden in that part, as it is near the summit of the dividing ridge of the Missouri and Mississippi rivers.

REMOVING EGGS TO OTHER CELLS.

On page 270, the assertion is made that an egg that is taken from any cell by a bee is destroyed, and is never again deposited by the bees. Now my observation may meet with opposition, but nevertheless I am settled on this point, and will say for the benefit of Mrs. Atchley, that it is a great deal harder for the queen to lay in one's hand than to deposit the eggs in different cells than it is for a bee to remove the egg from one cell to another.

Being a queen-breeder myself, I have frequently had bees go from one hive to another, and steal eggs to rear queens from, knowing full well that was the only source they could procure them, and I have seen them in the cell after they were deposited, before they were hatched. Only last year I had a colony of bees to hatch, and after sealing all of their brood, I removed all queen-cells, and gave them two combs of fresh eggs, and while they were rearing more queens, the bees removed the eggs, and reared ten queens on different combs by the side of the combs I gave them. Now is it possible that our Northern bees know more tricks, and are more intelligent than the bees in Dixie? If Mrs. Atchley will try different experiments in rearing queens instead of sticking to the one theory, she will discover in the near future a great many things to be wondered at, and will find out that bees have different ideas.

Guthrie Co., Iowa.

Capons and Caponizing, by

Edward Warren Sawyer, M. D., Fanny Field, and others. It shows in clear language and illustrations all about caponizing fowls; and thus how to make the most money in poultry-raising. Every poultry-keeper should have it. Price, postpaid, 30 cents; or clubbed with BEE JOURNAL one year, for \$1.10.



Do not write anything for publication on the same sheet of paper with business matters, unless it can be torn apart without interfering with either part of the letter.

Colonies Fine and Strong.

I took my bees out of the cellar yesterday, and they came out fine and strong. Only 2 colonies died out of 27.

S. A. PAIGE.

Masonville, Iowa, April 4, 1893.

Pretty Heavy Losses of Bees.

I put my bees out yesterday, and have lost 40 out of 64 colonies. I saw one man last Monday who had lost all he had—over 40; another that had lost 17 out of 18; another, 50 out of 112, and so on.

A. H. ROGERS.

Osseo, Wis., April 5, 1893.

Wintered About as Well as Usual.

It has been a fearfully cold winter, and all expected it would be trying to the bees, but colonies with sufficient stores and wintered out-of-doors in protected hives have come thus far through about as well as usual.

L. F. ABBOTT.

Lewiston, Maine, April 1, 1893.

Bees Appear to be Doing Well.

My bees are three-banded. I put them into the cellar on Nov. 24th, and they have had no flight up to date, but appear to be doing well. I have not a very large apiary, but it is the largest in the township. I am the first and oldest bee-man in the township. The weather now looks favorable for the bees to have a flight. I think I shall have them out soon.

R. HOWELL.

Gillett, Wis., April 3, 1893.

Bees Wintered All Right.

I took out my bees to-day, and they came out all right except one colony. I put into the cellar 48 last fall, having taken 1,200 pounds of honey from them during the season. Last spring I had 30 colonies. I keep a dairy in connection with bees, and they work well together. This is my third year in bee-keeping. I could not very well get along without the BEE JOURNAL.

A. J. PEDERSON.

St. Paul, Minn., April 4, 1893.

Every Colony Wintered All Right.

Winter is now about over, and I find that every one of my colonies has come through all right. We had a very severe winter, the thermometer registering 25 degrees below zero part of the winter. Some of my neighbors have lost almost all their colonies. Some that took my advice in preparing for winter, have lost none. The last three days have been nice and warm, and the bees are bringing in pollen from the willow.

G. W. BELL.

Bell's Landing, Pa., March 30, 1893.

First Flight for 140 Days.

The thermometer registered 64 degrees in the shade to-day, and bees are lively—what are left. It was the first flight since the middle of last November—nearly, or quite, 140 days.

CLARK A. MONTAGUE.

Archie, Mich., April 3, 1893.

Bees Wintering Well.

My bees are wintering well. I have 31 colonies in the cellar, and they will be confined about two weeks yet. I like the eight-frame Langstroth hive the best of any that I have tried yet.

CHAS. B. ALLEN.

Central Square, N. Y., March 27, 1893.

Bees all Wintered Well.

I put 46 colonies of bees in shape for winter last fall as follows: 12 colonies in 2-story chaff-hives, and the rest in 1-story chaff-hives. Now for this spring, at this date, I have 46 good colonies. They gathered the first pollen on March 24th, and again to-day.

ELBERT GREELEY.

Lorain, O., March, 30, 1893.

Worth Two Dollars a Year.

I thought when the present publishers of the AMERICAN BEE JOURNAL purchased it, I would never like it any more; but if it was worth one dollar then, it is worth two dollars now. I think it has improved so much. You may consider me a life-time subscriber, if you continue it that long. I wish to thank you for what you have done for me through the BEE JOURNAL.

A. FINNEY.

Farm, W. Va., April 5, 1893.

Came Out in Fine Condition.

I put about 40 colonies of bees into the cellar last fall, and they have come out in fine condition. Every indication is that we shall have a good honey season.

The BEE JOURNAL has been a great help to me in caring for my bees, and any one in this business, whether for profit or pastime as in my case, cannot afford to do without it, because the correspondents are mainly men of experience.

W. F. BRUNING.

Mt. Pleasant, Iowa, March 25, 1893.

By Feeding they Wintered Well.

The season of 1892 left many bee-keepers without a pound of surplus in this locality. From 3 colonies, spring count, I increased to 6, and one of them stored 40 pounds of comb honey. I was obliged to feed a little sugar syrup to 3 of my colonies. They have wintered well, as I only lost one colony from the diarrhea. One of my colonies was short of stores, so I fed sugar syrup during the winter, and they are doing very well. My bees are all Italians, with the exception of one colony, which I expect to Italianize the coming summer. The BEE JOURNAL is a welcome visitor at my place.

WM. F. RENK.

Sun Prairie, Wis., March 22, 1893.

Very Cold Winter in Vermont.

I have just finished reading my last BEE JOURNAL with pleasure. I like it very much. Mrs. Atchley's "School in Bee-Keeping" is just O. K. I am a beginner in the bee-business, having 2 colonies in the cellar. One is all right, but the other is short of stores. I have been feeding them for over a month sugar syrup, and they seem to be all right yet. We have had a very cold winter here, but most of the bees are wintered in cellars.

W. E. MORTON.

Huntington, Vt., March 28, 1893.

Good Prospects for Bee-Keepers.

The weather is now exceedingly pleasant, and colonies are building up very rapidly. There are good indications for prosperity among bee-keepers, at least such is the outlook. Button-sage is just starting to bloom in the lower valleys, while in this section, with its altitude, it blooms about 10 days or 2 weeks later. I am glad to see the AMERICAN BEE JOURNAL and *Gleanings* offering their testimonials against the adulteration of honey, fair and square. Good! Down with it!

ALBERT UNTERKIRCHER.

Redlands, Calif., March 27, 1893.

Nameless Bee-Disease in Tennessee.

We are now blessed with fine spring weather, and the bees, under the influence of sunshine and bursting buds and flowers, are happy. Colonies, owing to their loss in the severe winter weather, are generally weak, but are building up nicely; but they will have to whoop it, to get strong enough for the honey-flow, which usually sets in here about May 15th. The poplar, or white-wood, affords our first crop of honey in this locality.

Bees are suffering some with the "nameless disease." Aside from the wintering problem, this disease is our greatest drawback. It makes its appearance in the early spring, when we can least afford to lose a bee. Its symptoms with us are various. Some bees will become hairless, slick and shiny; others will crawl out of the hive in a shake or quiver, and seemingly swollen, but in cases of this kind I have invariably

found that they were not swollen, but full of honey. The salt cure for this disease, with me, has proved a failure. I have tried it until I am satisfied that there is no efficacy in it, and that it is only a waste of time to fuss with salt where your bees are sick with bee-paralysis. My remedy is to stimulate brood-rearing by feeding, and in that way pull the diseased colony through. This, of course, cannot save the loss of bees, but it usually saves the loss of the colony, and if the colony is not too badly weakened, you may expect some surplus honey from it, but not a full crop.

The man that will discover a specific remedy for this disease, will merit a high reward. Bee-keepers should, and would, be willing to pay liberally for such a remedy. Prof. Cook, Dr. Miller, or Mr. Doolittle could, in my opinion, afford to experiment in this line. H. F. COLEMAN.

Sneedville, Tenn., March 30, 1893.

Wintered Nicely—No Loss.

Bees wintered nicely. Every bee-keeper that I have seen tells me all is well, and no loss. I have not heard of a single loss so far this spring. The bees are on a boom today, as the peach trees are coming into bloom, and pollen is plenty, and the willing workers are getting in full time.

SAMPSON STOUT.

Udall, Kans., April 4, 1893.

Wintered Finely—Cell Protector.

The past year was a poor one for bees. I got only 430 pounds of honey, whereas the year before I got 1,800 pounds, all extracted. Bees have wintered finely. I lost only one out of 33, caused by mice. Bees are working nicely on peach blossom, and the plum is in full bloom.

Here is a description of my queen-cell protector: Take a piece of cheese-cloth $1\frac{1}{2}$ inches square, dip it in hot beeswax, then just wrap the cell so as to leave the point below the edge of the cloth, and it is ready to put in the hive. I have never lost one this way, putting it on the same time I take the queen out. I am well pleased with the "old reliable" AMERICAN BEE JOURNAL.

JAMES A. KING.

Sub Rosa, Ark., March 28, 1893.

Building Up Weak Colonies.

In looking my bees over on March 8th, I found one colony of Italians and one of blacks reduced to about one quart each, the Italians having some brood yet, but the blacks none, so I put both colonies into one hive, placing a division made of screen-wire between them. On April 2nd I looked them over again, and found both queens laying; but the blacks fell behind a good deal, so I took a frame of brood, bees and all, from the Italians, and gave to the blacks, thinking that they then had the same scent, but they started to fighting, and I ran for the smoker, and smoked them thoroughly, and

closed the hive. The next morning, to my surprise, I found every black bee killed in the hive except the queen, which was treated very kindly by the savage Italians. Why did the bees not get the same scent in the one hive, having only two thicknesses of wire-screen between them? Why did they not kill the queen also? Will some experienced bee-keeper please give some information regarding the cause, in the BEE JOURNAL?

April 2nd was a warm day, and bees gathered pollen from rye flour, which I had placed out on boards. AUGUST BARTZ.

Chippewa Falls, Wis., April 7, 1893.

He Beguiles with "Miles" of Smiles.

I just could not resist writing and saying, Hurrah for the AMERICAN BEE JOURNAL! In reference to the new department of questions and answers, I say like Mr. Doolittle in his comments on the "A B C of Bee-Culture"—"You are just shouting here." Both times I have written questions, I did so almost in "fear and trembling," and was more surprised at getting an answer than I would have been if I had heard no more from it. So the editorial on page 327 made me feel good. I am much obliged for all the help I get from the AMERICAN BEE JOURNAL. I like it better than any paper or book that I have yet seen on bee-keeping. I wish its publishers unbounded success.

E. S. MILES.

Denison, Iowa, March 25, 1893.

Convention Notices.

PENNSYLVANIA.—The Susquehanna Co. Bee-Keepers' Association will hold their 12th semi-annual meeting at the Tarbell House in Montrose, Pa., on Thursday, May 4, 1893. All are invited. H. M. Seeley, Sec.

Harford, Pa.

CONNECTICUT.—The annual meeting of the Connecticut Bee-Keepers' Association will be held at the capitol in Hartford, on May 2, 1893, commencing at 10:30. All bee-keepers are invited to attend, and bring an exhibit. MRS. W. E. RILEY, Sec., Waterbury, Conn.

NEW YORK.—The next meeting of the Allegany County Bee-Keepers' Association will be held at Belmont, N. Y., on May 4th, 1893, in the Hotel Belmont. All bee-keepers are invited to attend and make it what it should be—an interesting meeting.

H. C. FARNUM, Pres., Transit Bridge, N. Y.

Alley's Queen-Rearing book, or "Thirty Years Among the Bees," gives the result of over a quarter-century's experience in rearing queen-bees, and describing the practical, every-day work. By Henry Alley. It contains an "Appendix," showing the improvements made in queen-rearing the last four years. Very latest work of the kind. Nearly 100 pages, with illustrations. Price, postpaid, 50 cents; or clubbed with BEE JOURNAL one year, for \$1.30.

Honey & Beeswax Market Quotations.

The following Quotations are for Saturday, April 22nd, 1893:

CHICAGO, ILLS.—Honey is about cleaned up so far as fine comb is concerned. Quite a good deal of poor to fair is on sale, prices ranging from 13 to 15c. Fancy would bring 18c. Extracted, 6@8c. Beeswax, 25c.
R. A. B. & Co.

KANSAS CITY, MO.—Receipts and stocks very light, demand good. We quote: No. 1 white 1-lbs. 16@17c.; No. 2, 14@15c.; No. 1 amber 1-lbs. 15c.; No. 2 amber, 10@12c. Extracted, white, 7@7½c.; amber, 5@6c. Beeswax—20@23c.
C-M. C. C.

CINCINNATI, OHIO.—There is a fair demand for extracted honey at 6@8c. There is no choice comb honey on our market, and prices are nominal at 14@16c. for best white. Beeswax—Demand good, at 24@27c. for good to choice yellow. Supply good. C. F. M. & S.

NEW YORK, N. Y.—Comb honey is well cleaned up. Fancy white is selling at 14@15c. Off grades, 12@13c., and buckwheat, 9@10c. Extracted is dull, and the market well stocked with West India honey, which sells at from 68@75c. per gallon. Beeswax, 26@28c.
H. B. & S.

SAN FRANCISCO, CALIF.—Choice extracted is scarce at 7@7½c., and demand heavier than supply. Choice comb is not scarce at 10@12c., according to quality. 1-lbs. Beeswax is neglected at 22@23c.
S. L. & S.

KANSAS CITY, MO.—Demand good, supply very light. White 1-lbs., 16c. Extracted, 6@7c. No beeswax on the market. H. & B.

CHICAGO, ILL.—Fancy stock is very scarce, with plenty of inquiry, with good prices offered for same. It sells readily at 18c.; No. 1 comb, 16@17c. Dark sells slow. White extracted, fair supply, with good demand at 8½; dark, 6@7c. Beeswax—23@25c. J. A. L.

BOSTON, MASS.—Honey is selling slow and prices are lower. Best 1-lb. comb, 16@17c.—Extracted, 8@10c.
Beeswax—None on hand B. & R.

MINNEAPOLIS, MINN.—The market is good. We quote: Fancy white clover 1-lbs. sell fast at 18c.; 2-lbs. 16@17c. Buckwheat, comb, 13@14c. Extracted, in barrels, 7@8c.; in 5 or 10 lb. kegs., 9@10c. J. A. S. & C.

ALBANY, N. Y.—Honey market quiet at following prices: White comb, 14@15@16c.; mixed, 12@13c.; dark, 10@11c. Extracted, white, 8@8½c.; mixed, 7@7½c.; dark, 6½@7c. Beeswax, 26@30c. H. R. W.

Mrs. J. P. Cookenbach, whose advertisement appears on page 517, will be glad to have you write to her to secure a good place to stay during your visit to the World's Fair the coming summer. The BEE JOURNAL refers its readers and friends, with much pleasure, to Mrs. C., who will do the right thing by all who give her an opportunity to help them.

List of Honey and Beeswax Dealers,

Most of whom Quote in this Journal.

Chicago, Ills.

R. A. BURNETT & Co., 161 South Water Street.

New York, N. Y.

F. I. SAGE & SON, 183 Reade Street.

HILDRETH BROS. & SEGELKEN,
28 & 30 West Broadway.

San Francisco, Calif.

SCHACHT, LEMCKE & STEINER, 10 Drumm St.

Minneapolis, Minn.

J. A. SHEA & Co., 14 & 16 Hennepin Avenue.

Kansas City, Mo.

HAMBLIN & BEARSS, 514 Walnut Street.
CLEMOMS-MASON COM. CO., 521 Walnut St.

Albany, N. Y.

H. R. WRIGHT, 326 & 328 Broadway

Hamilton, Ills.

CHAS. DADANT & SON.

Cincinnati, Ohio.

C. F. MUTH & SON, cor. Freeman & Central ave.

Wants or Exchanges.

Under this heading, Notices of 5 lines, or less, will be inserted at 10 cents per line, for each insertion, when specially ordered into this Department. If over 5 lines, the additional lines will cost 20 cents each.

WANTED TO EXCHANGE—A 30-Horse Power Kokomo Engine and Boiler (stationary) in good condition—for a Portable Threshing outfit (must be in running order).
H. L. VonLienen, Somerset, Saline Co., Ills.

TO EXCHANGE—High Grade Safety Bicycle, for Honey or Wax.
17A4f J. A. GREEN, Ottawa, Ill.

WANTED—To exchange, a claim 1 mile from a thriving town in Logan Co., Okla. Ter., for land in Northeastern Texas, Southwestern Arkansas, or Northwestern Louisiana, contiguous to a river, in a good bee-keeping range. Correspondence solicited.

Address, RUFUS WILLIAMS,
15A4t Crescent City, Logan Co., Okla. T.

Advertisements.**This Adv't will Appear but Twice!**

WE have on hand the following widths of Planer Sawed Sections, First Quality: 1 15-16, 1½, and 7-to-the-foot—all 4¼x4¼ One Piece V-groove. Parties using said widths can get a bargain by writing for prices.

Our Polished Sections

are the finest and smoothest Sections made. Write for prices.

16A2t **WAUZEKA MFG. CO.,**
WAUZEKA, WIS.